

Claims

1. A cocoon-shaped colloidal silica that does not dissolve in an aqueous alkali solution of a pH of 11.5 or less.
2. A cocoon-shaped colloidal silica prepared from hydrolyzing an alkoxy silane condensate in the presence of an ammonia or ammonium salt catalyst.
3. A cocoon-shaped colloidal silica prepared by further heating under pressure the colloidal silica prepared by hydrolyzing an alkoxy silane condensate in the presence of an ammonia or ammonium salt catalyst.
4. A cocoon-shaped colloidal silica as set forth in Claim 3, wherein the temperature to which said colloidal silica is heated under pressure is 105 to 374.1 °C.
5. A cocoon-shaped colloidal silica as set forth in Claim 2 or 3 wherein said alkoxy silane condensate has an average degree of condensation of 2 to 8.
6. Polishing abrasive particles comprising the cocoon-shaped colloidal silica as set forth in any one of the Claims 1 to 5.
7. A process for manufacture of a cocoon-shaped colloidal silica, the process comprising adding continuously an alkoxy silane condensate or its solution in an aqueous solvent to an aqueous solution of ammonia or an ammonium salt or to an aqueous solution containing ammonia or an ammonium salt and an aqueous solvent, thereby hydrolyzing the alkoxy silane.

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8. A process for manufacture of a cocoon-shaped colloidal silica, the process comprising adding continuously an alkoxy silane condensate or its solution in an aqueous solvent to an aqueous solution of ammonia or an ammonium salt or to an aqueous solution containing ammonia or an ammonium salt and an aqueous solvent, thereby hydrolyzing the alkoxy silane; and further heating under pressure.
9. A process for the manufacture of a cocoon-shaped colloidal silica as set forth in Claim 8, wherein the temperature to which said alkoxy silane condensate hydrolyzate is heated under pressure is 105 to 374.1 °C.
10. A process for the manufacture of a cocoon-shaped colloidal silica as set forth in any one of the Claims 7 to Claim 9 wherein said alkoxy silane condensate has an average degree of condensation of 2 to 8.